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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,633	12/05/2001	Tetsuo Fukami	OGOH:103	7103

7590 07/21/2003

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[REDACTED] EXAMINER

LOUIE, WAI SING

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2814

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/980,633	FUKAMI ET AL. <i>M</i>
	Examiner	Art Unit
	Wai-Sing Louie	2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-39 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-6,10-35 and 37 is/are rejected.
 7) Claim(s) 7-9,17,36,38 and 39 is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1.) Certified copies of the priority documents have been received.
 2.) Certified copies of the priority documents have been received in Application No. ____.
 3.) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In claim 1, the name, “common electrode” and “counter electrode” are used in the claim. For the purpose of examination, “common electrode” is assumed for “counter electrode”.
- In claim 23, it is unclear how to show an electric flux line of an electric field. The electric flux is an imaginary line, which exists in theory. The flux line is always normal to the substrate and inclines toward the adjacent electrode. It is not understood what is claimed in this limitations.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,525,798 in view of Ohta et al. (6,208,399).

With regard to claim 1, US 6,525,798 disclose a liquid crystal display unit comprising:

- An array substrate (claim 1);
- A counter substrate opposing the substrate (claim 1);
- A liquid crystal layer sandwiched between the array substrate and the counter substrate (claim 1);
- A plurality of image (video) signal lines provides over a surface of the array substrate that is in contact with the liquid crystal layer, the image signal lines being aligned in a same direction (claim 1);
- A plurality of scanning signal lines provided over the surface of the array substrate over which the image signal lines are provided, but does not disclose the scanning signal lines being disposed perpendicular to the image signal lines (claim 1). However, it is well known in the art to have the scanning and image signal lines arranged in a matrix format such as disclosed in Ohta et al. (Ohta fig. 1). Therefore, it would have been obvious to provide the image signal lines perpendicular to the scanning signal lines in the device in US 6,525,798;

- A line-shaped pixel electrode provided in each of the pixel region of the array substrate that is surrounded by the image signal lines and the scanning signal lines, the pixel electrode disposed parallel to the image signal lines (claim 1);
- A common electrode provided in each of the pixel region and disposed parallel to the pixel electrode (claim 1);
- A switch element for electrically connecting the pixel electrode and one of the image signal lines in response to a signal received from the scanning signal lines (claim 1), where the pixel electrode and the common electrode are disposed adjacent to and parallel to one of the image signal lines (claim 1 and 4);
- The pixel and common electrode is made of opaque conductor and at least one electrode comprises a transparent conductor (claim 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 10-17, 18-35, and 37 (in so far as they are understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al. (6,208,399).

With regard to claims 1, 23-24, 28-29, Ohta et al. disclose liquid crystal display device (col. 4, line 47 to col. 23, line 5 and fig. 1 and 2) comprising:

- An array substrate SUB1 (fig. 2);
- A counter substrate SUB2 opposing the array substrate SUB1 (fig. 2);
- A liquid crystal layer LC sandwiched between the array substrate SUB1 and the counter substrate SUB2 (fig. 2);
- A plurality of image (drain) signal lines DL provided over the surface of the array substrate SUB1 over which the image signal lines DL that is in contact with the liquid crystal layer liquid crystal layer LC, the image signal lines DL being aligned in the same direction (col. 8, lines 1-4 and fig. 1 and 2);
- A plurality of scanning signal lines GL provided over the surface of the array substrate SUB1 over which the image signal lines DL are provided, the scanning signal lines GL being disposed perpendicular to the image signal lines DL (col. 6, lines 52-57 and fig. 1 and 2);
- A line-shaped pixel electrode PX provided in each of pixel regions of the array substrate SUB1 that is surrounded by the image signal lines DL and the scanning signal lines GL, the centerline of the surface of the pixel electrode PX disposed parallel to the image signal lines DL (col. 5, lines 21-25 and fig. 1);
- A common electrode CT provided in each of the pixel electrode PX and disposed parallel to the pixel electrode PX (col. 7, lines 5-10 and fig. 1);
- A switching element TFT for electrically connecting the pixel electrode PX and one of the image signal lines DL in response to a signal received from the scanning signal lines GL (fig. 1), where the pixel electrode PX and common

electrode CT are adjacent to and parallel to at least one of the image signal lines DL (fig. 1);

- The pixel electrode PX and common electrode CT are made of an opaque conductor comprises a transparent conductor (col. 9, lines 40-46 and col. 15, lines 13-16);
- Ohta et al. do not disclose the electric field and the flux line, but one with ordinary skill in the art would know that an electric field exists between the electrodes and an imaginary line, which is the flux line, formed between the electrodes. The electric flux line of the electric field is not a device limitation and does not carry any patentable weight.

With regard to claims 2-3 and 6, Ohta et al. disclose an additional electrode SD2 made of transparent conductor, the additional electrode SD2 being disposed over the array substrate SUB1 so as to be parallel to, partially overlapping with, and electrically connected to the electrode GT (the pair of electrodes SD2 and GT) that is disposed adjacent to one of the image signal lines DL (col. 9, lines 27-35 and fig. 1).

With regard to claims 4, 16, and 34-35, Ohta et al. disclose a gap, between the pair of the overlapping electrodes (SD3 and GT) and the scanning signal lines GL, is smaller than the gap between the pixel electrode PX and the common electrode CT (fig. 1).

With regard to claim 5, the common electrode CT is disposed to and parallel to the image signal lines DL (fig. 1).

With regard to claims 10-15, 27, 30-33, and 37, Ohta et al. disclose a light (blocking) shielding member BM covering a region between the common electrode CT that is disposed

adjacent to and parallel to the image signal lines DL (fig. 1). The light shielding member BM is a black matrix disposed on the counter substrate SUB2 and the array substrate SUB1 (fig. 2). The light shielding member BM is made of conductive material, chromium (col. 10, line 37). The light shielding member BM is electrically insulated from the surrounding members (fig. 2). The light shielding member BM is perpendicular to scanning signal lines GL (fig. 1).

With regard to claim 18, Ohta et al. disclose the light shielding member BM covers a region between common electrode CT and SD1 (fig. 1).

With regard to claims 19-22 and 25, Ohta et al. disclose the electrode that is disposed adjacent and parallel to the image signal lines DL is the common electrode CT (fig. 1). The common electrode CT is disposed over the array substrate SUB1 (fig. 1). The centerline of the common electrode CT is disposed adjacent to and parallel to image signal lines DL (fig. 1). The common electrode CT is inclined toward the adjacent pixel electrode PX (fig. 2).

With regard to claim 26, Ohta et al. disclose a pair of electrodes CT and DL is disposed so as to sandwich an insulating film PSV1 and the thickness of the insulating film PSV1 decreases from a side of the image signal lines DL (fig. 2).

Claim Objections

Claims 7-9, 17, 36, and 38-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

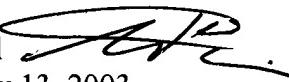
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (703) 305-0474. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



LONG PHAM
PRIMARY EXAMINER

wsl 
July 13, 2003